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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,856	03/22/2006	Hiroshi Ishibuchi	SAA-008	9237

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EXAMINER

NGUYEN, PHONG H

ART UNIT	PAPER NUMBER
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3724

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,856	Applicant(s) ISHIBUCHI ET AL.	
	Examiner PHONG H. NGUYEN	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 19-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,19-27 and 31-34 is/are rejected.
- 7) ☒ Claim(s) 28-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 24 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The preceding knife roller and the following knife roller always compress against each other to give opposite torque. It is unclear under what situation, the torques generated by the preceding knife roller and the following knife roller have the same signs.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 19-21, 23, 25 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Hideo (JP2002-284,430).

Regarding claim 1, Hideo teaches a cut off method for a cut off apparatus including:

a preceding knife cylinder 2 on whose peripheral surface a preceding helical knife 8 is provided;

a following knife cylinder 3 on whose peripheral surface a following helical knife 9, which cuts off a paper in cooperation with the preceding knife, is provided;

preceding knife driving motor 26 which rotationally drives the preceding knife cylinder;

a following knife driving motor 24 which rotationally drives the following knife cylinder; and

a cut off control device 27 which individually controls the preceding knife driving motor 26 and the following knife driving motor 24,

wherein the method comprises: giving, when the band-like paper is cut, the preceding knife and the following knife a specified amount of torque in the direction in which the preceding knife and the following knife are pressed against each other, by means of the preceding knife driving motor and the following knife driving motor (see the Abstract) respectively, wherein the specified amount of torque is generated based on the cutting torque necessary for the knives to cut off the web having a basic weight and being fed at a web feeding speed.

It is to be noted the web has a certain weight and moves with a certain speed and is cut by the knives. Therefore, a specific amount of torque is generated based on the web's weight and speed.

Regarding claim 2, since the rotating speed of the preceding knife cylinder 2 and the following knife cylinder 3 are equal and the knife cylinders (2 and 3) are under equal bending force due to the thickness of a workpiece, the value of the torque given by the preceding knife driving motor 26 and the following knife driving motor 24 is equal.

Regarding claim 19, the web is fed at a certain speed and cut at a certain length; therefore, the value of the torque generated by the preceding knife is based on the speed and the cut off length.

Regarding claim 20, the preceding knife and the following knife cut off the web smoothly; therefore, the cutting force is sufficient large to resist a cut off reactive force from the web to the preceding and following knives.

Regarding claim 21, Hedio teaches varying the torque of the drive motor; therefore, the torque pattern will have a trapezoidal shape. For increasing and decreasing cutting torque gives two non-parallel sides of the trapezoid, and keep the cutting torque constant at a high value and a lower value gives two parallel sides of the trapezoid.

Regarding claim 23, since the preceding knife motor and the following knife motor generated the same torque, their torque patterns are identical.

Regarding claims 25 and 32, Hideo teaches a method of cutting off a web having a basic weight and being fed at a web feeding speed between a preceding knife cylinder 2 that carries on a peripheral surface thereof a preceding knife 8 and a following knife

cylinder 3 that carries on a peripheral surface thereof a following knife 9, said method comprising:

determining an amount of cutting torque ($T_{xa}+T_{xb}$) necessary for the knives to cut off the web, based on the basic weight and the feeding speed of the web (it is to be noted the web has a certain weight and moves with a certain speed and is cut by the knives. Therefore, a specific amount of torque is generated based on the web's weight and speed.); and

while the web is being cut, driving the following knife and the preceding knife respectively with a first torque component T_{xa} and a second torque component T_{xb} of the cutting torque in the direction in which the preceding knife and the following knife are pressed against each other;

wherein the first torque component T_{xa} and the second torque component T_{xb} have opposite signs (the knife cylinders press against each other; therefore, the torque component have opposite signs).

See Fig. 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hideo (JP2002-284,430).

Hideo is silent on the torque pattern changing depending on the web feeding speed. It is well known that the feeding speed affects the cut on the web. Therefore, when the feeding speed changes, the cutting torque changes. When the cutting torque changes, the cutting torque pattern changes.

7. Claims 26, 27, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideo (JP2002-284,430) in view of Lingle et al. (6,139,938), hereinafter Lingle.

Hideo teaches a method for cutting off a web substantially as claimed except for the first torque component and the second torque component having different values.

Lingle teaches a web having different layer and each layer having a different thickness. See Fig. 3.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to apply different value of torque on the preceding knife and the following knife for cutting a web having different layer and each layer having a different thickness.

Allowable Subject Matter

8. Claims 28-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 28 is allowable for setting forth the step of varying the value of cutting torque while cutting the web.

Response to Arguments

9. Applicant's arguments filed 07/29/2008 have been fully considered but they are not persuasive.

Applicant's argument with respect to claim 1 is not persuasive. The web has a specific weight and is fed with a specific speed. In order to cut the web, a sufficient amount of torque must be applied on the web. Therefore, Hideo teaches the step of applying a specific amount of torque based on the web's weight and feeding speed. The web has a specific weight and is fed with a specific speed.

Applicant's argument with respect to claim 24 is not persuasive in view of 35 USC 112 1st paragraph.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHONG H. NGUYEN whose telephone number is (571)272-4510. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/P. H. N./
Examiner, Art Unit 3724
November 8, 2008

/Timothy V Eley/
Primary Examiner, Art Unit 3724